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NEWS IN BRIEF

Sperry Rand
joint venture?

FOLLOWING the successes of Such Univac in Scandinavia and Nippon Univac in Japan, Sperry Rand Corp is considering a similar venture proposed by a "large company" in another country, chairman and chief executive J. Paul Lyet has revealed.

Univac won Siemens for several years, but a spokesman in Munich declared that Siemens was no longer interested in joint ventures of the kind Univac wanted.

Two other prime candidates are Olivetti in Italy and Phillips in Holland.

Northern HQ

AN office to house the sales, software and engineering staff that support its customers in the North of England and Scotland has been opened by Parkin-Elmer Data Systems at Altrincham, Cheshire. The office is the company's Northern region headquarters.

Engineers' access

CHEMICAL engineers interested in the Institute of Chemical Engineers' Physical Property Data Service, PPDS, can now access it via the Nottingham-based bureau, Gamma Associates, which is running PPDS on its Digital Equipment PDP-11/70 minicomputer. PPDS includes a database of 17 constant and 15 variable properties of more than 400 compounds.

First in NW

The first IBM System 34 to be delivered in North West England has gone to a newly-formed subsidiary of G. H. Brownbill Ltd, the Warrington-based software house.

Winning views of
life in year 2000

MANY views of the world and society in the year 2000 were presented by readers who entered the Datakit Computer Weekly essay competition. The object was to forecast how computers and communications would be used and how these techniques would impact on society.

The standard of entry was high and the judges had a hard task selecting the winners (CW, June 8). Last week, when he presented the prizes, William Woollard of the BBC's Tomorrow's World series, who was one of the judges, commented on the wide range of ideas that had been developed. He said such competitions were important because they gave people involved in many areas of the information industry the opportunity to express their views.

Here (left to right) joint first prize-winner, Bryn Jones, discusses his essay, written with William Woollard, and Tony Thornton and John Finkle who each received one of the special Computer Weekly prizes.

Maintaining ops systems
simplified by IBM move

By Peter Hawitt

IN a move which will simplify the job of maintaining operating systems, IBM is to introduce a new method of distributing Program Temporary Fixes to OS users.

Starting in August, VSI, VSE and MVS users in the UK will receive monthly PTF tapes uniquely configured to their installed System Control Program and Selectable Unit format licensed programs.

Each tape will in effect contain only those fixes which are relevant to the destination installation.

The service, which IBM refers to as the direct distribution of customised PTFs, will be based on the register of active programs maintained for each customer in the European Program Library files.

Similar systems will operate in the US and in the major European countries.

The system will be particularly appreciated by MVS sites, where the possible permutations of SUs can make it very difficult

for a customer to determine which fixes he needs.

The application of fixes is typically a lengthy job requiring dedicated access to the machine and, although some sites select from current distribution tapes only those fixes that they need, many follow a policy of applying every fix, whether relevant or not.

In either case, the process

selection of relevant PTFs will ease the workload of system programmers responsible for maintaining the installation.

By establishing a monthly update cycle, the new system may also encourage the more speedy application of fixes. In view of the volume of work, some sites have scheduled the incorporation of fixes only when

an operational problem has arisen.

The move is unlikely to affect the position of plug-compatible users, as full PTF tapes continue to be available.

Amidst already delivers tailored PTF tapes to its users, based on the consolidation of IBM master tapes and incorporating the company's own modifications.

Low-cost voice transmission
system developed at Bath

A REVOLUTIONARY voice digitising method that could squeeze four or five times as many calls on to the same line as pulse code modulation, is being developed at Bath University, where it is sufficiently advanced for it to be the subject of a patent application by the National Research and Development Council. It could cost ten times less than existing low bit rate voice encoding methods.

Called Time Encoded Speech, the technique assumes that voice information is made up of a small number of basic wave shapes and that waves that have the same basic shape sound the same to the human ear, even though they differ in amplitude and form.

At the transmit end, the shape of the wave between each con-

secutive pair of zero points is analysed and categorised and its time interval measured. The shape and time are each assigned a numerical value and the two numbers form one of a group of different sound "symbols".

At the receive end each symbol is decoded and the appropriate waveform generated. Work on Time Encoded Speech at Bath has been led by Professor William Gosling, of the School of Electronic Engineering, and Brigadier Reginald King, now army telecommunications director at the Ministry of Defence.

Brigadier King told Computer Weekly that TES transmission was being simulated at Bath using a Digital Equipment PDP-8, converting speech into 1,800

symbols a second, each of five digits.

Implemented in hardware the system would cost no more than £100, according to Brigadier King.

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Post Office
to relax
specs for
System X

IN line with recommendations in the White Paper on the Post Office the chairman, Sir William Barlow, said there would be more tolerance on specifications for the whole range of equipment bought for System X.

Sir William said that overseas marketing would be done by the companies concerned, but the Post Office would demonstrate the equipment to potential buyers and offer consultancy services.

"We want to do all we can to help exports," he said.

This relaxation of the traditionally rigid Post Office policy came as the corporation announced its results for the 12 months up to March 1978, showing a surplus of £28.7 million of which £22.5 million was pulled in by the telecommunications division.

Commenting on the plan, George McKendrick of the Institute of Administrative Management, who co-ordinates its Telecommunications Managers Division, said the Carter Committee, which set up the System X relaxation as a step forward.

The White Paper also gave details of an agreement between the government and the Post Office under which real costs for telecommunications are to be reduced five per cent over five years. This is to be achieved at the same time as showing a 4.5 per cent return on net assets of the Telecommunications Division.

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Briefing

Unions' worry
over micros

FOUR major unions have tabled resolutions relating to the impact of microelectronics for the TUC Congress in September. This has delayed until early next year the preparation of a major report by the TUC on the subject.

The resolutions from AUEW/Tass, the Society of Civil and Public Servants, the Post Office Engineering Union and National Union of Bank Employees cover a wide spectrum of the issues involved, including requests for government assistance to include software, and calls from all the unions for better government research and planning to cope with the social consequences of creating and using advanced technology.

Targets for action

CIVIL Service computer centres are believed to be among targets of the Society of Civil and Public Servants for industrial action if the government does not implement in 1979 the findings of the independent pay research unit, which provides statistics used in Civil Service pay negotiations.

DP needs

AN EXTRA 100,000 data processing professionals would be needed over the next 10 years, including 1,000 more computer graduates a year over and above the 2,000 currently being turned out by UK higher education institutions. This was the view expressed last week by Professor Mike Pitteway of Brunel University at the announcement of Brunel's microprocessor development laboratory.

Swansea halted

THE three IC1 System 4s at the Swansea Driving and Vehicle Licensing Centre have been shut down for a week because maintenance engineers are trying to service the centre's air conditioning plant. This action, in support of a pay claim by government blue collar workers, has halted the issuing of driving licences and vehicle registration documents.

Modcomp addition

A SECOND, more powerful model has been added to Modcomp's new classic line of microcomputers in the US. Called the 7870, it takes up to one megabyte of two-way interleaved 16-bit memory, but otherwise is similar to the only other model in the line so far introduced, the 7800.

10c for calor

BP's £250,000 deal. Eight IC1 System 4s have been ordered by Calor Gas for a data processing plant in the UK. The plant is in the UK and is now being installed. The plant is now being installed. The plant is now being installed.

Tories to honour Labour commitments

IF returned to power at the next elections, a Conservative government would honour all commitments entered into at that time for supporting the UK microelectronics industry, according to the Party's industry spokesman Sir Keith Joseph.

Speaking after the latest announcement of support for the semiconductor industry by Industry Minister Eric Varley — £70 million over five years from the Department of Industry (see page 3) — Sir Keith told Computer Weekly that the Conservatives would review all expenditure proposals from the present government but would not go back on any specific commitments made by the government.

And Hastings' Tory MP Kenneth Warren, who has taken a particular interest in the computer industry, commented that assistance from government sources for new industries was always a side benefit that government support gives a cachet of quality to companies' endeavours when they try to export new ideas," he said.

Making it clear that official Tory policy was not yet crystallised on the subject, he wondered whether, if it was decided that the industry should be supported, £70 million over five years was enough.

"There is a division of thought on whether the government should be involved in high-

risk areas. I do not like to see the government taking shareholdings in companies: its job should be to encourage rather than get involved," he said.

The latest Dol plans for support of the UK microelectronics industry were enthusiastically welcomed by Dr Gorry Thomas, general manager of ITC Semiconductors at Sidcup, which is to start production of 64K RAM samples later this year.

"We are at an advanced stage of discussion with the Department for support under both the development and the production schemes," he told Computer Weekly. "I think the Department's plans are extremely well-founded."

Government micro plans, page 3.

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Joseph... "Tories will not go back on any specific commitments."

BOC's £10m
move into minis

THE board of BOC International has decided to spend £10 million over the next year on acquisitions that could make it a major force in the microcomputer systems business both in the UK and overseas.

Chief executive of the BOC computer services division, Brian Mills, told Computer Weekly that in the short term BOC was mainly interested in taking over UK systems houses, but that its intention was also to acquire firms on the Continent and in the US.

Mills pointed out that BOC already had a presence on the Continent on the bureau services side, through the BOC Datastore office in the Hague and the Datastream offices in Frankfurt and Rotterdam. Datastream is the financial service acquired by BOC about 18 months ago.

Another likely development at BOC, according to Mills, is the establishment of a microprocessor systems house, but this would be achieved by acquiring suitable people and building a

microprocessor operation around them, rather than by taking over existing firms in the business.

Recently, the Grand Metropolitan group also set up a micro workshop to study microsystems applications for the group (CW, July 27).

Mills sees BOC as already being a major international services company, which is why he quoted a dollar figure, \$40 million, as an estimate of BOC's total turnover from computer services this year.

According to Mills BOC's computer service business, which now comprises mainly bureau operations, is growing at a rate of 35% a year, even without acquisitions, and a move into microcomputer systems should take the company's total turnover from services over the \$100 million mark by 1980.

In the US, BOC now has a major presence through its acquisition a few months ago of Alroco, a billion dollar firm whose main line of business is the same as BOC's — industrial gases. Alroco already has some involvement with computer services through the computer training schools that it runs in Washington DC and California.

In order to concentrate on the acquisitions project, Brian Mills has stepped down as managing director of BOC Datastore, the post being taken over by Chris Wood, formerly Datastore's sales and marketing director. Mills remains chairman of Datastore.

Tracking down long-stayers

THE Home Office is planning to introduce a computer to help track down overseas visitors who overstay their permitted time in the UK. This would catch people who try to get around immigration controls by entering the country on a short-stay visa.

The Immigration Service already carries out checks by hand on a random basis. The computer will allow this to be much more thorough.

US group seeks Euro links

THE young and growing Association of Data Communications Users in the US is keen to create links with user groups in Europe that share its interest in matters like international data networks and communications standards.

The executive director of ADCU, Dr William Saxton, told Computer Weekly that the association was deeply involved with domestic legislation, such as the new Communications Act, which will dramatically affect the whole future of telecommunications in the US, including

data communications (CW, July 20).

But Dr Saxton emphasised that "a dialogue across the ocean" was one of the aims of ADCU, pointing out that its 175 members included international companies like the Chase Manhattan Bank with computer operations on both sides of the Atlantic.

Interested parties should contact the association president, John P. Compitello, c/o ADCU, PO Box 1184, New York, NY 10018, USA.

COMPUTER WEEKLY'S INSIDE NEWS

Reports on the expanding world of word processing and telecommunications are featured in this week's International section (pages 10/23). The Canada Development Corp has come to the rescue of the floundering Wordplex organisation and is merging it with AEC to form a group that could have considerable potential in the market (page 18). Project Prelude gave a glimpse of what telecommuting has to offer to society in general and the business community in particular. Morris Edwards outlines some of the implications of the satellite-linked experiment (page 18). There is also a report from Washington by Catherine Davis (page 18) and David Hawk (page 18) who says US keeps (page 18). The Palmer describes some

Downside by Chad Data Dynamics (page 18) and Michele's Privateview Programmer Notes (page 18). Software File Transfer protocol based on 386 (page 18). People in the News (page 18). Op Spot (page 18). Micro News (page 18). International Section (page 18/23). Letters to the Editor (page 24). Chess (page 24). Sales (page 24). News (page 24). News (page 24). News (page 24).

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Happiness is a computer date

A STUDY by the West German government has reported that marriages of couples introduced through a computer dating service are more likely to be successful than others. Over a ten-year period, 3,000 husbands and wives, half of whom met through a computerised marriage bureau in Hamburg, were asked: "Are you happy in your marriage?" Of the computer couples, 40% said they were "very happy", while 15% of the others said the same.

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DOWNTIME

by Chad

Buzz, buzz...

SOMETHING appears to be wrong with the US semiconductor industry. Like all good state-of-the-art (buzzwords) leading-edge-of-technology (buzzwords) industry, it has been second only to the computer industry in inventing punchy, succinct and imaginative terminology with which to describe itself — buzzwords.

But, suddenly, it appears to have lost the gift, or more alarming, picked up a classical education, for the new vogue expression in Silicon Valley is "crossing the Rubicon."

It is, I asked myself, a new breakthrough in rare mineral technology? No, the phrase in question refers to the growing trend among the semiconductor companies to forwards-integrate (buzzword) their product ranges.

This is "crossing the Rubicon".

According to Chambers' Twentieth Century Dictionary, the Rubicon is a stream in Central Italy. In Roman times, it separated Caesar's province of Gallia Cisalpina from Italia proper. The first "crossing the Rubicon" was made by said Mr Caesar, a move that was taken as an open declaration of war by the Republic.

I am greatly saddened that the analogy is so transparent. The industry is obviously losing touch with itself, and possibly gaining a hold on reality.

YOU will be familiar with the parlance of our Good Neighbours, the French, about their language, and their frequent attempts at encroachments of Franglais in inventing new French words for each new Anglo-Saxon technological discovery as it comes along. "Logiciel" for "software" and "matériel" for "hardware" spring to mind. "Informatique" is a catchy word, if untranslatable. Well, they have now come up with a new word covering the field of office automation: "bureautique." Interesting, but how does one translate it? "Burodica?"

A revised American National Standard for Fortran, informally known as Fortran 77, was finally approved by ANSI in April this year (CW, May 18). This standard itself has not yet appeared in print,

although a preliminary draft was published in Sigplan Notices in March 1976. Compilers written to the Fortran 77 standard are not yet generally available, although most manufacturers have

indicated their intention to produce them. In this article, DAVID MUXWORTHY, of the Edinburgh Regional Computing Centre, summarises the main points of Fortran 77 by comparison with

the previous (1966) standard. In a subsequent article, he will describe the new of thought currently being followed by the ANSI Fortran committee, FJ3J3, on the next standard, due in 1982.

Revised standard for Fortran

last, the introduction of mixed-mode expressions.

So far as possible, the committee attempted to generalise the language so that where the 1966 standard demanded a variable, Fortran 77 allows an expression and where formerly an integer entirely was required, now any arithmetic type is allowed.

The new type CHARACTER, so far as is logically possible, follows all the normal rules of Fortran. A character variable may have its type defined in one statement and be dimensioned in another, character functions exist and so on; it is possible to access substrings.

The character type statement is in the style of the current IBM arithmetic type statement so that a program unit could include the following statements:

```
CHARACTER*10 A,B,C,D,E
A,B,C,D,E = 'ABCDE'
IF (A(1) .EQ. 'A') THEN
  P(1) = (A(1) + B(1)) * C(1)
```

The interpretation of these statements is fairly obvious. Fortran 77 is accommodating to strings of different lengths, padding with spaces or truncating on the right as appropriate. An

omitted substring subscript implies the first or last position in the string. The colon, used here, in the array declarator and elsewhere is the only new character in the character set.

Characters may be equated, but only to other characters, either explicitly or indirectly through COMMON statements. Zero length strings are not allowed. Character strings may be compared in relational expressions according to the collating sequence used by the processor and, in order to allow a machine independent comparison, functions are provided which use the ASCII collating sequence.

The only new operation defined for characters is concatenation, with operator // . Character expressions, including constants, may be used in place of a format in a read or write statement and character strings may be used in place of a logical link in a formatted input/output statement, thus giving the effect of INQUIRE and DECODE, but with a different syntax. In this example, numeric variables X, Y, Z are converted under format control to characters in the string C.

```
READ (1, 100) X, Y, Z
```

Hollerith characters may no longer be stored in arithmetic or logical variables.

Fortran 77 includes commonly implemented facilities like mixed mode expressions, IMPLICIT, PAR, METE, EN, TRY and direct access input/output, although not necessarily in the way manufacturers have already adopted. For example, direct access statements specify the record number of a keyword

REC =

Fortran 77 arrays may start at any lower bound, not necessarily 1, and may have up to seven dimensions, dimension bounds may be expressions (of a limited type) and the rightmost (or only) dimension of an array used as a dummy argument may be specified as *, thus formalising the long established programming convention of writing 1 in this position. Subscripts may be an integer expression, subject only to conditions about side effects of function references in the same statement.

Mixed mode expressions are allowed for every combination of arithmetic variable except for the combination double precision and complex; this is because the data type double precision complex does not exist.

The order of evaluation of expressions is not defined and processors may evaluate mathematically equivalent expressions, however the programmer can force the order of evaluation by using parentheses. New relational operators for testing logical equivalence are introduced.

It is slightly surprising that Fortran 77 has adopted one of the basic control structures: IF THEN ELSE, but not a DO WHILE or DO UNTIL. The DO loop has been updated to allow for an integer, real or double precision control variable and parameters which may independently be of these three types and which may take positive, zero or negative values; most markedly perhaps it has been changed to allow for the zero trip loop where the body of the loop is not executed if the iteration count calculated on first entering the DO is less than one.

The value of the DO index is defined on completion of a loop to be the value it would have had for the next iteration had there been one. The extended range of a DO-loop is no longer allowed.

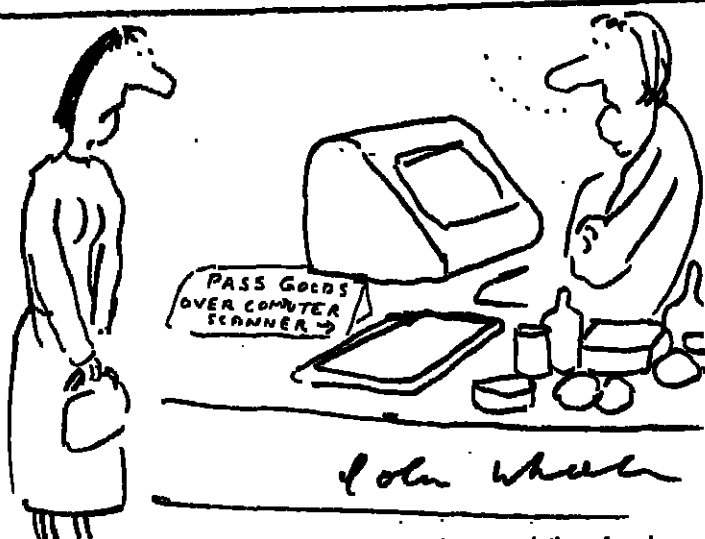
```
IF (X) THEN
  statements
ELSE
  statements
END IF
```

In place of an ELSE there may be an ELSE IF (Y) THEN followed by a block of statements up to a following ELSE, ELSE IF or ENDIF. Transfer into such a block of statements from outside the block is prohibited.

Fortran 77 input/output is little different in facility from that available on most large machines but there are some differences in syntax as mentioned above. Compared with the 1966 standard, direct-access and free-format input/output have been introduced, together with OPEN and CLOSE statements, which are optional for sequential files, the INQUIRE statement which may be used to determine certain file attributes and the concept of "internal files" which are in fact character strings.

There are minor extensions to format codes, for example to force the printing of leading zeros and to cause blanks in numeric input fields to be treated as null characters rather than as zeros. Surprisingly, the `FORMAT` for text is still allowed in a `FORMAT` but not in a `DATA` statement.

The library functions have been tidied up and extended and, where appropriate, made generic so that for example the programmer may write `SORT`



Has the US Postal Service gone hexadecimal?

So don't rush...

A CORRESPONDENT of mine received a letter from America recently bearing this stamp, with the letter A in place of a value. She wonders whether, as part of the computer revolution, the US Postal Service has gone hexadecimal!

Not wishing to disappoint her, I gather the explanation is rather more mundane. The US Postal Service, planning to raise its letter rate from 13 cents to 16, printed millions of 16 cent stamps, but was then told by the government to keep the rate down to 15 cents. There were hardly any 15 cent stamps in stock, so a supply of emergency stamps was dug out of the back rooms, to tide things over.

Don't bother to chase after the A stamps as rarities; there must be enough for every stamp collector in the world to paper his walls with.

Quite right

MISPRINTS, as every writer knows, can be very embarrassing. Take this sentence from a recent article on ICL COPS in the computer press: "The statement that data records will be selected on the basis of what they contain rather than what they are stored is nonsense."

You're right. It is nonsense!

Data Dynamics aid Brunel micro lab

A joint venture to develop micro-based systems and products is being set up by the Computer Science Department of Brunel University and terminal manufacturer Data Dynamics. The basis of the arrangement is £15,000 worth of power supplies and other hardware from Data Dynamics for use in the department's new microprocessor laboratory. This will greatly augment the meagre £18,000 a year that the department is allowed for new equipment.

Two conditions of the Data Dynamics contribution are that its personnel will be able to use the lab, and that the company will have the right to exploit any commercially viable developments that may result from researches carried out.

Head of computer science, Professor Mike Pittaway, says marketable developments would be patented by the National Research and Development Council and the profits shared by Data Dynamics and Brunel.

The laboratory will be used mainly by fourth year students carrying out microprocessor oriented projects.

Professor Pittaway, who is a technical consultant to Data Dynamics, points out that any project carried out in the lab for Data Dynamics that had a commercial deadline would have to be paid for by Data Dynamics in the same way that any other company would have to pay.

He adds that the lab would be able to produce microprocessor software that could be of value to Data Dynamics and other

hardware manufacturers using microprocessors in peripherals and terminals.

Data Dynamics believes that the lab should be able to help it in programming the microprocessors in its ZIP series of terminals. The newest of these is Tele-ZIP, a portable display terminal that comes with a keyboard, an acoustic coupler and the necessary electronics to enable it to plug into a standard television receiver. Having no integral VDU it costs only £550, and typical uses include programming at home and order entry by salesmen.

Data Dynamics will retain ownership of the equipment donated to Brunel, but will maintain it free of charge. The lab will be run by computer science lecturer Tony Ellerman.

Row over South African trip results in new selection system at Leeds

A NEW computer technical working party is to be set up by Leeds City Council to choose its next computer system, when the order is put out to tender in the early 1980s.

This follows a shift of responsibility for the computer from the Department of Finance to the Department of Administration, made earlier this year after the council investigated a trip to South Africa, financed by ICL, which was made by James Beer, the director of finance who chaired the old working party, and Kenneth Potts, the chief executive.

Following the investigation

the two men asked that they should cease to have any responsibility for the computer system "to avoid any possible criticism in the future."

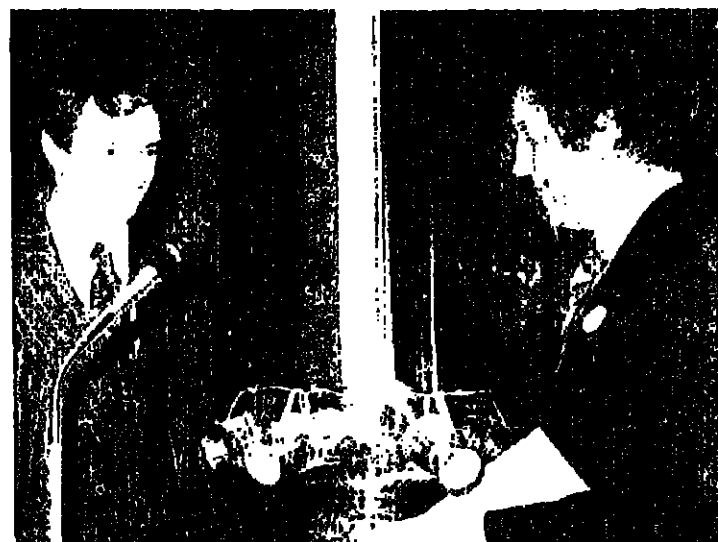
Leeds now uses an ICL 1904S system, but according to Coun Keith Loudon, a member of the council's computer sub-committee, which was set up last month, ICL will not receive the next order automatically, but will have to compete at least with the three manufacturers which have previously tendered Honeywell, Univac, and IBM.

"Computers wear out," said Loudon, "and our experts have told us that our present ICL

machine will last only until about 1980/81. As the installation of a new computer at that time will mean the expenditure of a vast sum for the city, we feel that any decision on what system to use can best be made by a technical working party."

"It has not been established yet," he added, "but the computer sub-committee is to meet this week to discuss who should sit on it."

Loudon also says that now that the computer system comes under the Department of Administration, "we hope to develop wider applications and make it a tool rather than a master."



A 'model' DP manager

Concern for the morale of his own staff and the needs of his users were the chief factors in earning Roy Heeling-Brown, of Hornby Hobble, the DP manager of the year award for 1976.

Heeling-Brown (pictured left) received this year's DPMA/Date Logic award of £250 and a silver punch bowl and cups from Data Logic managing director Alvin Thomas at a reception last week in the Savoy Hotel, London.

The award, which was first presented last year, aims to reward outstanding achievement in DP management.

This year's judges were impressed by the way in which Heeling-Brown involved his staff in improving the performance and customer service of the company's ICL System Ten installation, which handles sales, stock control and invoicing applications. Runner-up for the award was

Andrew Lewin, DP director of insurance brokers J. H. Minard & Co, who has been involved in upgrading from an IBM 360/22 to an IBM 370/125 installation. He won a rose bowl and £150.

Neville Taylor, chairman of the DPMA, commented that the winners had displayed exceptional achievement in creating and maintaining staff morale, which he believes is the key to successful DP management.

In addition to Taylor, the judges for this year's awards were Brian Elson, managing director of Solcon Computer Services, Derek Scrivener of the National Computing Centre, Innes McBeath of the London Business School, last year's winner Sydney Perkins of International Harvester Ltd, Ken Owen technology correspondent of The Times and Kit Grindley of Warwick Dynamics Ltd.

£2.5m airlift of ICL machines to Australia

IN one of the largest airlifts of computer equipment, 35 tons of ICL 2901 mainframes were loaded into a McDonnell Douglas DC-8 in Luxembourg and flown to Melbourne, Australia. The DC-8 was chartered from the Cargolux freight carrier, and

the shipment was handled by EMG Air Services, which carried the machines by road and sea to Luxembourg.

The precious payload, valued at £2.5 million, consisted of two 2960s, one for the Australian government in Canberra, and

the other for Swedish telecommunications company L. M. Ericsson in Melbourne; and the first two 2960s to be shipped abroad, both of which were for Composite Buyers Ltd, Melbourne grocery wholesalers. Ericsson is replacing a 19037.

Aspinall moves to UMIST



APPOINTED professor of computation at the University of Manchester Institute of Science and Technology is Professor David Aspinall, currently at University College, Swansea.

Aspinall is head of the Department of Electrical and Electronic Engineering at Swansea and is known for several research projects.

Security service

THE security service proposed by the National Computing Centre is to go ahead and details should be available soon. The service (CW, May 11) will act as an umbrella organisation for education of users in computer security.

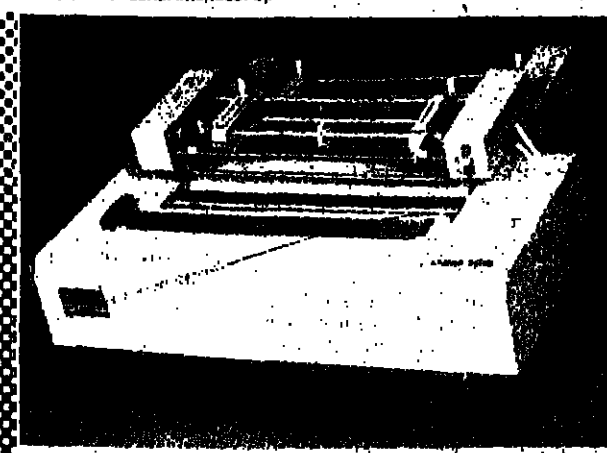
Settling down

FINANCIAL secretary to the Treasury, Robert Sheldon, has admitted to the Commons that new procedures introduced at sea ports where computer systems are being installed for online imports clearance were "somewhat slow" but were "settling down."

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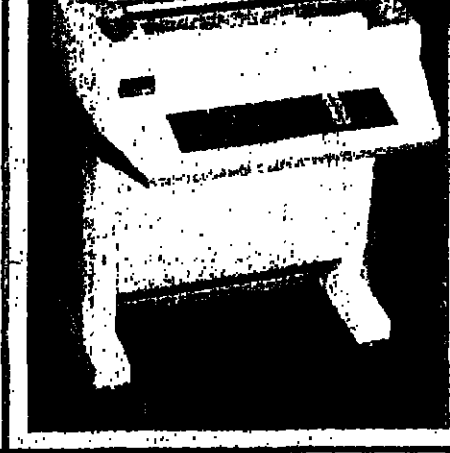
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MICHIE'S PRIVATEVIEW

When the drill sergeant's days are done...



DO computers ever get bored of being instructed via interminable streams of imperative commands?

The helpless indignity of their situation puts me in mind of the recruits marching towards the edge of a precipice-lined barrack square: "For God's sake say something, sergeant, even if it's only good-bye!"

For such of the world's teeming machines as may be afflicted with ennui or despair, I have news. You too may one day have to think for yourself.

Tomorrow's programmers will one day indolently disband themselves of the drill-sergeant chore. How relaxing it is to be able to bark out: "...left, right, left, right... about turn... left, right... now get home using your bleeding common-sense!" and then withdraw to the mess-room.

The most forthright expression of this excellent laissez-faire notion is that you should equip the machine with a basic reasoning engine, and thereafter tell it nothing but facts on the understanding that it will do its best with them. As you build its stock of knowledge with just the right set of relevant assertions about what is or is not the case in the world of sorting, merging, data control, queuing, scheduling, game playing, or whatever, so the system builds its own capability to sort, merge, control data, manipulate matrices, etc. simply through its own efforts to prove that any "goal" statement fed to it really can be deduced logically from its accumulated store of facts.

Let us consider, for example, what are the relevant facts about the concatenation of two lists L1 and L2 to make a

third list L3. One obvious fact is that for any list L the concatenation of nil (the empty list) with L is just L. Another, with just the needed amount of additional meat to it, says that if the concatenation of L1 and L2 is L3, then the concatenation of L1.1 and L2 must be L3.1. Given knowledge of only these two facts, a logically minded system ought to know exactly what to do when told that the concatenation of Tom, Dick, Harry and Mary Jane, Lou, Priscilla is the list known as popgroup.

How do we find out whether the system has been smart enough to work out the only substitution ("assignment") in the world of imperatives for popgroup consistent with the known facts? Try "print (popgroup)" and prepare to register relief if we get "Tom, Dick, Harry, Mary, Jane, Lou, Priscilla".

In 1971-72 Bob Kowalski then still at Edinburgh, was saying this sort of thing with a wild gleam in the eye and a wealth of technical detail. In effect he was saying: "Whatever you want the system to know, tell it the facts in first order predicate logic. The result will have an obvious declarative semantics - it is quite unambiguous in what it says about its problem world. If, moreover, the system is equipped with a theorem-prover behind the scenes, capable in principle of deducing anything deducible from the starting facts then whether you like it or not, the logic statements now take on a second life. They acquire a procedural semantics."

What this means is that we can forget the past dismal 30 years of drill-sergeant programming, and use as a programming language a

vehicle which has been there all the time, much studied and well understood by mathematicians, namely first order predicate calculus.

Kowalski showed in detail how a theorem-prover based on J. A. Robinson's "resolution principle" could be made into an interpreter for such a language. But his hearers did not like any of this. Some felt that he was right but mad, others that he was wrong if only they could think exactly how. The majority took the pragmatic view, tried and tested on problems in all times and ages, that you might as well ignore the whole thing until you are shown a miracle or two.

Miracles take time and sweat and ingenuity and doggedness and flair. Kowalski's disciples in Edinburgh, Marcellus, Western Ontario and Hungary have deployed these qualities in good measure over the intervening years. The name of the resulting miracle is PROLOG, a programming system meticulously faithful to the original concept, but actually running on commercial machines with efficiencies fully comparable with, for example, Stanford's highly optimised pure LISP system.

Those who, like myself, have for many years followed the PROLOG development and have done a little PROLOG programming are inclined to over-excitement. I find myself not only planning to retool my own laboratory's work on the new basis, but speculating about the "expert systems" of the 1980s.

Donald Michie

SOFTWARE FILE-1

Predictions over DG Eclipse fulfilled

INDICATIONS that Data General would add commercially-oriented software to its latest Eclipse computer, the M/600 (CW, February 2), have been fully borne out by the announcement of major enhancements to its multiprogramming Advanced Operating System (AOS).

In addition to Cobol and RPG II compilers, the new facilities include DG's interactive data entry/access applications development tool, the Infos file management system and a powerful sort/merge utility.

All the software was previously available under RDOS on Eclipse C/330 systems, and will now be supported under AOS on both C/330 and M/600 systems.

The five products are functionally identical to those offered under RDOS, notes the company, and present an unchanged interface to the user. However, the work of transferring them from the single-user RDOS environment has not been trivial, and has been accompanied in some cases by significant internal changes, according to a spokesman.

The commercial multiprogramming extensions to AOS have been in use for periods up to a year at some eighteen test sites, including one in the UK, North Thames Gas. Regular deliveries are scheduled to begin early in October.

Said to be the only minicomputer Cobol to implement the Ansi 1974 standard at its highest levels, AOS Cobol includes an interactive debugging package using Cobol-like verbs. The package lets users set traps or breakpoints, examine and modify data items, and then resume execution.

In common with the RPG II compiler, and with the PL/I software released earlier this year (Software File, January 26), the Cobol compiler is shareable, so that a single copy can serve several users concurrently.

An enhanced implementation of IBM RPG II, the AOS version is said to be highly compatible with both System 3 and 360/370 DOS RPG II. The software includes an editor, program analyser, an interactive symbolic debugger, and interfaces to Infos.

from the supervisor's control. Facilities are also available for designing and storing sequential data formats interactively.

An interesting feature of Sort/Merge is that the user can specify his own collating sequence, in addition to standard Ascii sequence. It also accepts files generated in any AOS language, including Infos Isam and database formats.

The addition of Cobol to RPG II brings to eight the number of languages supported under AOS, which previously offered Fortran IV, Basic, PL/I, Pascal, assembler, and DG/L-1111.

The commercial enhancements are priced at £2,650 for Cobol or Idea, £1,680 for RPG II or Infos, and £304 for Sort/Merge.

December launch

AN international quarterly journal is to be launched in December aimed at engineers, scientists, and managers involved in using programs engineering. Called *Administrative Engineering Software*, it will be published by Computer Mechanics, 6 Cranbury Place, Southampton. Tel: 0702 21297.

Idea also provides access to Infos databases, allowing data validation against files at entry time, and dynamic updating from online terminals.

The system, in addition, offers a terminal monitor, supporting automatic transaction logging and allowing overall control

of the system.

Valued at around £90,000, this was announced as an unspecified technical writing job. Altergo however, would neither confirm nor deny the connection.

Dr David Freeman of Ketrin Told Computer

Databases demand more skills

Unilever uses, is only one example - I scribble out a design in two or three hours. It's no great disaster to change it two or three times until the user gets exactly what he wants.

In the future, John sees smaller users, running a centralised database system and larger ones linking a distributed network of databases. He thinks that many larger users will maintain their databases on a bureau because of the ease of operation this affords them.

"The bureau industry can't really compete against minis and micros for the smaller applications, but will continue to be the sensible alternative for larger users - especially now when staff are so hard to find."

John has found that accountants are better at dealing with than DPMs. This, he claims, is because DPMs tend to exercise control on the way things are done and are not nearly as clear about what they want.

Accountants are a much maligned breed. They certainly make the best users. They know exactly what they want but

don't interfere with the way it is achieved.

"They don't know anything about computers and don't want to. As long as you produce the goods, they leave you alone to get on with it."

"I've been quite lucky, both because my clients are pretty easy to work for and because I work in Ramis, which means that things can be changed without any fuss if somebody does change his mind, but I have seen guys tearing their hair out because they have to re-do work which has taken them a few weeks - just because the client changes his mind. And, on most of these occasions, the client is usually a DPM."

John has been with UCSL for about three years and thinks he will probably stay in bureau work for a long time to come. "In a bureau, time literally is money and so you are constantly under a lot of pressure. If you want a peaceful life, bureau is certainly not the place to be. It's not right for some people, but I love it and I suspect that I would be really lazy if I wasn't Ricked."

SOFTWARE FILE-2

Xerox Sigma replacement pack ready

THE hardware on which Xerox users will run the new compatible CP-6 operating system has now been announced by Honeywell and is aimed at users of Xerox Sigma 9 and large Sigma 6 and 7 systems.

The announcement, so far only made to Xerox users in North America, includes two top-end models in Level 66, designated Level 66/DPS/C3 and C5. The C3 model is designed to support up to 120 time-sharing users and the C5 up to 200.

CP-6 is an adaptation of the Xerox Sigma CP-V operating system.

The new operating system, designed to preserve the main features of CP-V while running on the 36-bit Level 66 machine rather than the 32-bit Sigmas, comes with new re-entrant language processors for Cobol 74, Ansi Fortran, APL, Text and Basic, and will also support the Honeywell IDS II database system.

The hardware is an adaptation of Honeywell's new top-end Level 66/DPS systems which supplant the 66/60 and 66/80.

Biggest problem for Honeywell - and for users - is that the hardware-software package will not be available until November 1979. This, allied with the cost, may well lead significant numbers of users to opt for the alternative from Telefile.

Informatic's European moves

BEST known for its Mark IV data management system, of which more than 1,200 installations have been made, the software products division of Informatics Inc is quietly building up a strength in the European market for applications software and showing a cautious interest in the small systems market.

Both trends are exemplified in the announcement of an IBM System 3 implementation of the Accounting IV/General Ledger system.

Offering virtually the same capabilities

as the mainframe version, the software includes a series of user-oriented report writers and will be available in Europe later this year.

In addition to standard general ledger functions, the system offers features for budgeting, profit planning, cost allocation, and foreign currency conversion. Report writers available include a free-form English-based language for producing financial statements, a matrix report writer, and graphical output facilities.

Accounting IV/General Ledger is part of a comprehensive family of accounting systems which also includes packages for accounts payable, accounts receivable, and standard produce costing.

The mainframe software, written in Ansi Cobol, runs on IBM and Burroughs systems and has about 350 users, predominantly in the US. A version for Honeywell equipment will be ready next year.

Usage in the UK was originally restricted to the UK offices of multi-national companies, but several sales have been made in the last year to major British-owned firms and installations in the UK now number 10.

One recent customer, International Stores, evaluated seven similar systems before opting for the Informatics package. Having developed and outgrown its own ledger system, International Stores chose to purchase a system because of the prohibitive cost and time penalties of internal software development.

Due to be released in Europe later this year is a powerful extension to the Accounting IV/Accounts Payable system. Designated the purchase order commitment module, the new product will permit three-way matching of purchase orders, receiving documents, and vendor invoices.

An Informatics spokesman noted that the company is gearing up to become a full-line supplier of application systems to financial and insurance users. It had already acquired a personnel system from a company in Milwaukee, Wisconsin and was in the process of acquiring a payroll system, he said.

The spokesman confirmed, however, the company had experienced a setback in one of its earlier application ventures, Production IV (CW, May 20, 1978). This package, he said, was no longer actively marketed either in the UK or the US.

In addition to being too expensive to market, it had also been too demanding in the skills required.

OS PTFs: no problems for non-IBM users

ALTHOUGH IBM's new system for distributing OS PTFs (CW, July 27) raised initial doubts about the position of look-alike manufacturers such as Amdahl, it seems in fact unlikely that the move will raise any problems for non-IBM users of IBM operating systems.

One anxiety was that the new distribution method

brought one step closer the possibility of IBM maintaining systems software remotely via a telecommunications link.

One US manufacturer, Basic Timesharing, has already implemented a system for remote online maintenance of installed system software, which it operates in conjunction with a system for remote hardware diagnosis.

With the 3030 series, IBM introduced its own remote hardware/software check-out service, based on the remote support facility (RSF) option. This facility, an attached diagnostic processor, allows IBM customer engineers to exercise an installed machine under the control of central mainframes connected via the public telephone network.

Comparable with Amdahl's remote diagnostic service, RSF and its links to a worldwide network of debugging processors in effect supersede the existing Retain/370 database. However, the volume of PTF material involved would make its delivery over a low-speed communications link very lengthy and - as a result - expensive.

Now Contu recommends copyright protection

THE US National Commission on new technological uses of copyrighted works (Contu) has finally come down in favour of recommending copyright protection for software.

Contu was previously unable to agree over software copyrights, but had no such problem in recommending copyright protection for computer-readable databases.

The vote this time, ten in favour with two

against, will be reflected in the commission's final report to Congress following nearly three years of work. Congress was also recently invited to consider the question of software patentability.

Dissenters on this occasion again included the writer John Hersey (Software File, March 23) who was joined by Rhoda Karpak, executive director of the Consumers Union.

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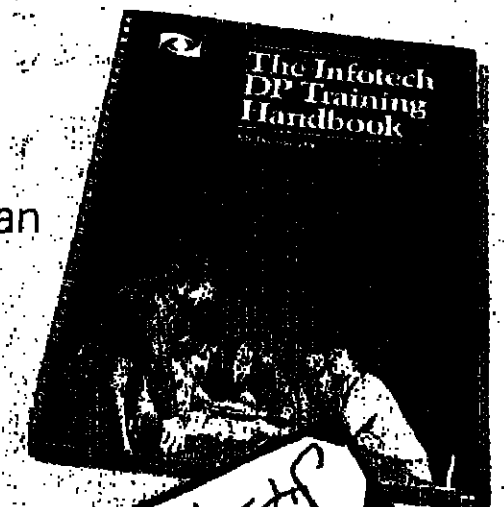
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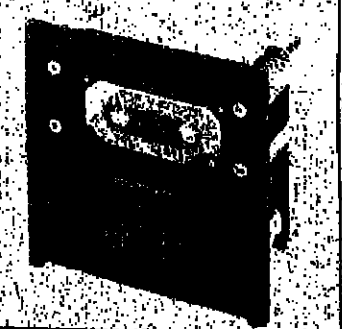
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Puzzler

OTTIFESSANT is a well known series of initial letters and J F M A M J J A S O N D. Another: But what do you mean of the mystic sequence A T G C V L S C A P? See page 50 for solution.

Digico launches a teaching system

A TEACHING system called Tutor has been introduced by Digico. It consists of a choice of hardware based on a Digico M16 series processor, an 11 Megabyte disc, and up to 16 Regent VDUs, together with a suite of Basic programs for the construction and operation of courses.

The system includes no course material; Digico intends teachers to design all this themselves. Courses can consist of text, multiple choice questions,

and wrong answers, etc. Because all the software is in Basic, the system can be used for other applications, such as administrative tasks, while Tutor is running.

Tutor was demonstrated to Mrs Shirley Williams, Secretary of State for Education, when she visited the company's Stevenage, Herts, plant to present a Design Council award. This was for the M16E mini, a 16-bit word machine which uses a micro-programmed processor instead of random logic, enabling the number of chips needed to be reduced from 400 to 180.

One program is used to run students' sessions while another allows the teacher to input the course material. This includes the text, the questions, the right



Education Secretary Shirley Williams has Tutor explained to her by Ken Atkinson, Digico marketing director. Looking on is David Harington, software services manager.

Second order for Manman

THE second order for Scicon's manufacturing management system, Manman, has come from Oxford Electronic Instruments, manufacturers of medical electronic equipment, which will use it to store and

process information relating to stock, sales and the delivery of its goods. Valued at £85,000, the system ordered consists of a 128K Hewlett-Packard System 1000 with a 50 Mbyte disc store and four VDUs.

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UK services company goes into PoS market

ENTERING the point-of-sale system market, Pritchard, Brown and Taylor, the UK market research and computer services company, has announced details of its Salepoint PoS system.

Based on Computer Automation's Naked Mini and programmable Datapod 2000 PoS terminals, Salepoint is a distributed system aimed both at the top-end, supermarket-size organisations and the smaller retailer who requires just a few terminals.

Pritchard, Brown and Taylor has also announced that two Salepoint systems have been sold already: one to the British Market Research Bureau which will use it to collect

data from a large number of retail outlets, and the other to Woking-based Garage Management Services, the parent company of Datapod, which will use it to provide a point-of-sale information service on a bureau basis to petrol stations.

Initially, the GMS system will use one 32K Computer Automation Naked Mini, but this eventually will be expanded into a dual processor system to handle additional terminals.

Value of the two orders is put at about £35,000 excluding the cost of the Datapod terminals, the quantities of which have yet to be decided.

Applications which PBT envisages for Salepoint include stock control, sales analysis, VAT accounting, and management information/financial reporting. It can also analyse customer payments into cash, card or cheque categories.

All software for the system has been developed by PBT, and this includes communications software for automatic overnight polling of terminals and custom software for the handling of multi-terminal accessing, signal errors and failed terminal identification and polling. PBT is also looking at the possibility of running a bureau service.

Leo staff reunion is planned

A REUNION of staff who worked for Leo Computers during the 1950s and 1960s has been proposed by one of their number who now works for ICL, and he would like to hear from others to see how much interest there is in such a gathering.

Roy Farrant, now an ICL sales manager, says that an informal get-together was held some time ago, attended by 80, so he thinks a more organised event

could attract 150 of the staff who formerly worked on the Leo II and Leo III-1 at Harrow House, Queensway.

The reunion would be held in London. Anyone interested should get in touch with Roy Farrant at ICL, City Wall House, Chiswell St, London EC3, telephone 038 5822. Having assessed the response, he will then announce the arrangements.

Scots firm introduces a security system for North Sea oil rigs

A PERSONNEL security system for North Sea oil rigs has been introduced by Rockall Data Systems of Aberdeen, using terminals from another Scottish firm, Fortronics. The system keeps track of the movement of staff between shore bases and oil rigs, checking on authorisation to protect against possible terrorist attacks and recording information on staff as required by law. Oil rigs are considered to be prime targets for terrorists.

All staff are issued with magnetically-encoded identity cards carrying a photograph. Before boarding the helicopter to fly to the rig, they insert their cards into a terminal, which checks that they have been authorised to travel. On arrival

at the rig, the cards are inserted in another terminal, so that a constant check is kept of everyone's whereabouts.

This information is also important in the event of accident or emergency. The system can be expanded to record

GA wins chemical contract

TO help it maintain high standards of quality in its acrylonitrile and hexamethylenediamine (raw nylon) manufacturing process, Monsanto, the UK subsidiary of the US chemical giant, has installed a General Automation data logging system at its Seal Sands, Middlesbrough, plant.

Valued at £130,000, the equipment

comprises 16 GA 48 microprocessors, two 16K central processors, a 600 lpi printer, a matrix printer, two 3 Mbyte disc drives, five VDU and three teletypes.

The testing procedure involves taking samples of nylon for laboratory analysis and logging the details of these samples on the GA system.

IBM's new head of Office Products

SHORTLY after announcing that it is studying the possibility of making its General Business Group a worldwide subsidiary, IBM has changed the man at the top of its Office Products Division, one of the two main divisions of the group.

The new president of OPD is Richard Young who was vice-president of communications — the top public relations job at IBM. He takes over at OPD from James Forese who is now IBM's assistant treasurer.

The IBM study that could lead to General Business Group being made a worldwide subsidiary will take several months to complete, according to the company, and will include the US and the 21 other countries that have GBG organisations.

The other main part of GBG is the General Systems Division, which sells the System 32, System 3 and System 34 small business configurations and the Series 1 minicomputer. The latter represents one of several areas of conflict between GSD and IBM's DP Marketing Group which sells mainframes and network equipment, because Series 1 is offered by GSD as an alternative to the DP Marketing Group's 3780 distributed processing system for use in SNA networks.

The Office Products Division has become one of the less profitable parts of IBM over the last few years and in 1977 it returned an operating profit of 8.4 per cent compared with the 26 per cent margin achieved by IBM as a whole.



The answer is a lemon

ON a floodlit bill board, perched above the rooftop of St Louis, Missouri, a massive placard declares, "Our IBM computer system is a Lemon," and it is signed "A Dissatisfied Customer." To emphasise the point the sign is illustrated with a large lemon. According to a report from the States an IBM spokesman said, "We know it's up there. We don't know who put it up... but we are

trying to find out. We'd like to sit down with him and discuss the situation."

Later the company said that it knew who the user was but wasn't letting on. It added that General Systems Division personnel, the people concerned with Series 1 and System 3, were "working with the customer" to resolve his difficulties in a "businesslike manner."

First new Criterion in UK

CITY commodity trader J H Rayner is replacing its six-year-old NCR Century with a 128K NCR Criterion I-845, the first to be installed in the UK. The new system, costing £200,000 includes seven VDUs and two 300 lpm printers. It will provide online trading information, and New York and Amsterdam offices are to be linked to it shortly.

Mass storage system installed at Tesco

UP to 102,000 Megabytes of data can be held in the IBM 3850 mass storage system installed at the headquarters of the Tesco supermarket group, Cheshunt, Herts. Each compartment in the honey-comb array holds a magnetic tape cartridge with a capacity of 50 Megabytes and a data set recorded on any of the cartridges can be accessed in 10 to 15 seconds.

The availability of the mass storage system from IBM was one of the main reasons for Tesco's decision to switch from ICL to IBM last year (CW, November 17, 1977). Other reasons listed by Tesco were the high speed printing facilities provided by the IBM 3800 laser printer and the "systems availability" possible from the MVS operating system.

Tesco says that MVS was chosen in preference to ICL's VME/B because it had far fewer unpredicted breaks than VME/B and could handle a much more

complex job environment. Tesco could not wait for ICL to correct these shortcomings. Tesco's data processing plans include the implementation of an SNA network which will involve about 10,000 terminals located all over the UK when it is complete in about 10 years from now. About 8,000 of the terminals will be PoS units installed at Tesco supermarkets.

One of the two mainframes ordered by Tesco from IBM, a 3032 that has already been installed, is the first 3032 in the UK, and the other machine, a 3031, will go in at Cheshunt early next year. Conversion of Tesco's 700 ICL programs to IBM is expected to be 90 per cent completed by autumn 1979. Nearly all are written in Cobol.

● An engineer is pictured installing the IBM 3850 mass storage system at Tesco's Cheshunt headquarters.

US 'word machine' based on the 360

A NOVEL design of large-scale word processor is to be introduced in the US by a computer leasing company, partly as a way of using up its outdated IBM 360s.

DPF Inc of Hartsdale, New York is now testing its "Word Machine," which typically uses a 360/30 as CPU, 3330 disc storage, and between 10 and 50 specially designed intelligent terminals as typing stations.

The software will run on any 360, 370 or Amdahl machine, and provides a word processor of considerably greater power than any currently available.

With a big CPU, there is virtually no upper limit to the number of terminals that can be used, but the system would not be economic with fewer than 10. Each terminal has a Diablo daisy wheel printer attached to it, but other IBM peripherals can be used such as the ultra-fast laser printer or a COM recorder.

Each terminal has its own Intel 8080 microprocessor, but no

PROM; the software is all stored on the mainframe and read into the terminal when required.

This means that there can be a very large range of functions available — over 100 different programs at present. The screen is 64 lines by 80 characters, with sideways scrolling up to 200 characters.

Incorporated in the mainframe software is an automatic indexing system that enters every non-trivial word in a document into a giant inverted file.

Retrievals using Boolean logic can be used to find documents long after they were written. The link-up with COM could be useful in connection with this, as purges could transfer documents that are no longer needed online to microfilm automatically, while keeping their indexing on the computer.

Automatic indexing for microfilm is a subject in which there is considerable interest, and Kodak is already testing the

Word Machine in its own applications.

Costing between \$150,000 and \$214,000 for a 10-station system, the Word Machine is not cheap, but it may form the beginnings of large-scale communicating Electronic Office systems.

As well as Kodak, an unnamed US government office is now testing the machine.

Export services handbook

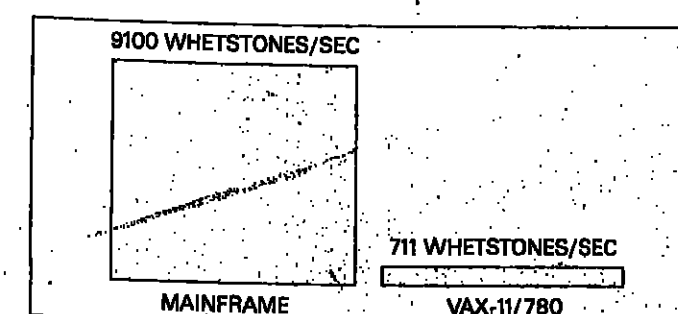
TO aid existing and potential exporters of both products and services, the British Overseas Trade Board has published the Export Services Handbook guide to government and non-government facilities. The book costs £2.50 plus 30p packing and postage, and is available from the Publications Sales Unit, BOTB, Export House, 50 Ludgate Hill, London EC4M.

Digital's VAX-11/780 takes on the world's leading scientific mainframe.



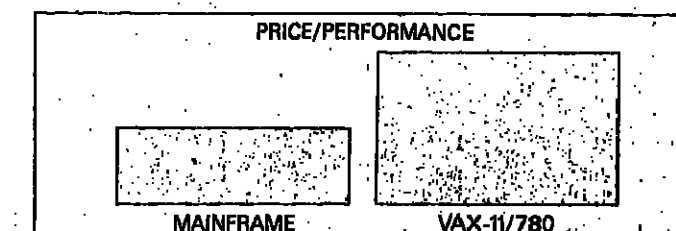
And wins two rounds out of three.

Round one to the 60 bit mainframe: Speed. The mainframe is still the speed champion with 9100 Whetstones per second.

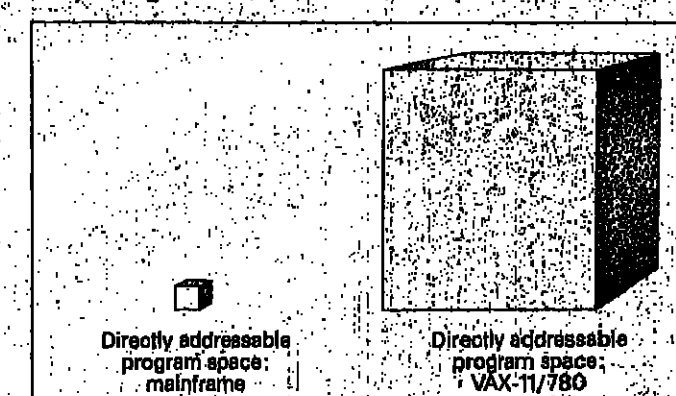


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PEOPLE

President of BEAMA for 1978/9 elected

PRESIDENT for 1978/9 of the British Electrical and Allied Manufacturers' Association (BEAMA), is Michael Parkinson, chairman and chief executive of Crompton Parkinson Ltd.

He has also been a director of Hawker Siddeley Electric since 1976 and of Hawker Siddeley Group since 1971. During 1979/80 he represented Hawker Siddeley Electric on the BEAMA Council.

Harry Jackson, a director of GEC Management, was appointed deputy president of BEAMA.

Chris Wood, who was sales and marketing director of BOC Data-solve, has been appointed managing director. Roger Wallhouse has been promoted from marketing manager to marketing director, and Cyril Banyard, previously deputy managing director, becomes deputy chairman. Doug Eyelands, previously director of external relations, assumes the title of technical director.

John Washington has been promoted to European software development manager with Modernm, and Jim Whitfield to European technical support manager. Both were previously European technical support analysts with the company.

Denton Smith, managing director of Data Sciences International, has been appointed to the board of the parent company, the Barr and Wallace Arnold Trust, with effect from September.



Chris Crawford, a director of Panosonic Systems UK subsidiary, has been appointed vice-president for Europe. He will be based at the European HQ in Holland.

Washington conference

Scheduled for November 7-9 at Washington, DC's Sheraton Park Hotel, the US Federal Computer Conference and Exposition is designed for government computer users.

Among the topics dealt with by the three-day programme will be software conversion, privacy and security, the latest advances in products and services, and technological trends in the computer field.

AT&T, Honeywell, CSC, General Automation, Parkinson and IBM are some of the companies which will be exhibiting at the Exposition.

Further details and registration forms can be obtained by writing to Federal Computer Conference, Box 368, Weyland, Mass 01778, USA.

Michael Spenser, until recently sales manager of Geveke Electronics, has been appointed UK manager.

Kenneth Diben has been appointed to the board of the Kalamazoo Group as a non-executive director. He left Hambros Bank, where he was a director, earlier this year to devote more time to his private business consultancy interests.

Cheryl Pink, formerly a sales representative with L'Oréal, Cella Forrest, who was an air stewardess with British Midland Airways, and Jan Roberts, previously a sales representative with A. B. Dick, form the new team at CPU Computers, which will market the System M-One small business computer in the South-East. Venetia Weston-Webb, formerly a press officer with Shell, has become marketing administrator with CPU.



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THE twenty-second International Operational Data Security Workshop, organised by Operational Data Security Corp, will take place at the City University, London, England on August 21-24. The subject will be confidentiality and credibility of the data processing function. Register with the Registrar, Operational Data Security Corp, 8 Swarthmore Lane, Dix Hills, NY 11746, USA, or by phone on August 18 only with City University, 01-253 4380 ext 347, or Operational Data Security (US) (616) 455-1818.

APPLICATIONS of machine-aided image analysis is the title of a conference to be held in the Nuclear Physics Lab of Oxford University on September 4-8 and sponsored by the Institute of Physics. Further details from the Conference Secretary, Dr David J. Stanley, 8511, Harwell Laboratory, Didcot, Oxon OX11 0RA, (tel: 01235 4441) ext 0882.

THE seventh IEEE Computer Society International conference, Compcon 78, will take place on September 5-8 at the Capital Hilton Hotel, Washington DC. Its subject will be computer communications networks. For details contact Compcon, Box 78, P.O. Box 690, Silver Spring, MD 20910, tel: (301) 490-7007.

THERE will be two consecutive conferences on the subject of computer-aided design. The first, September, introduction to CAD/CAM, will be held on September 18-20, and Interactive Technology in Computer-Aided Design on September 21-23. Both have been organised by the British Chapter of ACM Association for Computing Machinery. Further information can be obtained from the Conference Secretary, C. J. Gillingham, C/O Giorgio Vella, Istituto di Elettronica, Facoltà di Ingegneria, Università di Bologna, Viale Risorgimento 2, 40136 Bologna, Italy, tel: 051 832022.

A WORKSHOP on the theory and application of fuzzy reasoning will be given by Professor Lotfi Zadeh, University of California, Berkeley, California, on September 11-12. Further information from Dr L. Zadeh, Department of Electrical and Electronic Engineering, Queen Mary College, London, U.K. tel: 01-580 4581, ext 373 or 407.

Max Fennell, a 20-year-old draughtsman with Dataproducts, Dublin, represented Ireland in the World Life-Saving Championships held at the Crystal Palace, London, in July. Matt has already swum for his country twice in life-saving competitions. In Ireland in 1975 against France and Australia, and in the last world championships in Berlin in 1976.



John Horan, who is chairman of the US company Merck's board of directors and its president and chief executive officer, has been appointed a director of NCR.

Eric Sutton, previously a personnel manager with Univac, has joined Hoggett Bowers Selection as a regional consultant in the London office.

Terry Carter, of Redifon Computers, previously development manager, has been appointed engineering manager. Dave Hart, who was product engineering manager for Secheck, has become product manager, engineering at Redifon.

Ian Griffiths joins Trent Polytechnic's computing services department as systems manager from York University where he was a systems programmer.



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Computers, communications and technology transfer, Jerusalem conference on Information Technology, Information Processing Association of Israel/IEEE, Jerusalem.

Box trip, Association of Independent Computer Specialists, From Tower Place, London, 10.00. Tickets £5.00 from AICS, tel: 01-457 0678.

Operational data security workshop, Operational Data Security Corp, City University, London EC1. Register August 18 only, tel: 01-253 4380 ext 347.

Cybernetics and systems fourth international congress, World Organisation of General Systems and Cybernetics, Amsterdam. Details Dr J. Rose, College of Technology, Eindhoven, tel: 020 64521.

Conference on parallel processing, IEEE Computer Society/Western State University, Ballwin, Michigan, USA.

Meeting, VM UK and Ireland Users' Group, Manchester. Details from Iain Stinson on 01-585 5111, ext 2700.

Signpost 78, fifth conference on computer-aided design and interactive techniques, Association for Project Management, Birmingham, Alabama, Georgia, USA.

August 28-September 1, Eighth Australian Computer Conference, Australian Computer Society, Canberra.

CAD/CAM computer-aided design and manufacturing, conference and exhibition, Computer and Automated Systems Association, Los Angeles.

SYMPOSIUM on interactive techniques in computer-aided design, IEEE Computer Society, Bologna, Italy.

International computer communication conference, ICCS 78, International Council for Computer Communication, Kyoto, Japan.

Eamonn Cooper has joined Insight Marketing and Personnel Consultants in Dublin as senior personnel consultant. For the last year he has been running his own restaurant, the Pot Pourri, and before that was head of organisation and methods with the Roadstone Group.

Peter White, sales manager of Alcora, has been promoted to sales director.

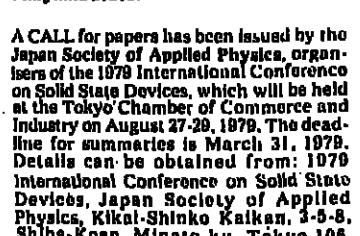
Scanner fund

THE Walsgrave Hospital, Coventry, scanner appeal fund (CW, September 1, 1977), which evolved an unprecedented response from the people of Warwickshire, has now officially closed.

The fund's total was way over target at about £410,000, plus an additional £100,000 from the West Midlands Regional Health Authority.

The hospital has been able to buy not only a £380,000 Ektachip scanner, but two extra: an Ektachip scanner which puts the results on to X-ray film. And this will leave enough to pay the £20,000 installation costs and have £100,000 left for future machine updates and the training of hospital staff in the use of the machine.

A CALL for papers has been issued by the Japan Society of Applied Physics, organisers of the 1978 International Conference on Solid State Devices, which will be held at the Tokyo Chamber of Commerce and Industry on August 27-29, 1978. The deadline for submission is March 31, 1979. Details can be obtained from: 1979 International Conference on Solid State Devices, Japan Society of Applied Physics, Kikui-Shiroko, Kaituma 3-5-5, Shiba-Koen, Minato-ku, Tokyo 106, Japan.



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Gasmen look at array processor

AFTER using a Univac 1106 for eight years, British Gas London Research Station needs greater capacity and is looking for a replacement.

The LRS aims to keep abreast of techniques used in the oil industry and has looked at several array processor arrays as ICL's DAP. A larger Univac machine has also been considered.

Software developed at the station for analysis and prediction of gas field development, and distribution network planning was demonstrated last week, to celebrate 50 years since the laboratory came into existence as the Fulham Research Laboratory of the Gas, Light and Coke Co.

A new program called Graep is used for assessing different strategies of gas and oil extraction in the North Sea and Irish Sea gas fields.

Another program run on the 282K 1106 system uses weather reports to predict demand for gas,

which can vary five per cent with a one degree Centigrade change in temperature.

The station developed its own hardware monitor, which shows that 80 to 90% CPU loading has been achieved.

The station also uses three minis as parts of analytical instruments. An X-ray fluorescence spectrometer from Link Systems, based on a Data General Nova 2, is used to identify elements present in a sample of any material. As well as pinpointing the main elements in seconds, it can detect minute traces of other elements within half an hour non-destructively.

A 32K Philips 852M controls an X-ray diffractometer for identifying crystalline compounds in a material and a Varian 311A controls a mass spectrometer and a gas chromatograph used together in further materials analysis.

The British Gas scientist operating this X-ray fluorescence spectrometer can control the sensitivity of the display, concentrating on any part of the spectrum, call for identification of a detected element, and compare profiles with other samples or readings stored on disc.



First products released

A TACTICAL communications management system, and ruggedised terminals for industrial environments are among the first products from Systems Production, a new company manufacturing mini and micro based computer systems.

The new company is associated with Systems Designers and the shares of both companies are owned by the holding company, Systems Designers International.

Housed in a new, purpose-built 7,000 square foot factory in Farnborough, Hants, the company is aiming for a turnover of £280,000 in its first year of business.

Fabians fail to clear the DP mists

THE latest group to jump on the bandwagon of those expostulating on the social impact of computers is the Fabian Society, which has published a new tract entitled "The computer and society" by Tom Crowe and John Hywel Jones, both of the

Computer Science Department of Thames Polytechnic.

Sadly, the mists of confusion and ignorance surrounding this important subject are in no way cleared by this pamphlet; rather they are made worse by hysterical and muddled thinking.

Understanding of the pamphlet is inhibited at the initial level by a mass of misprints and illiteracies. Having waded through these, one is next struck by a mistake that is commonly made by lay people but is surprising coming from professionals: the anthropomorphising of computers, as if they were alien invaders who walked and talked among us.

"Man must not allow the computer... to define its own role. Like some alien force, it has gradually digested a major part of our records. The computer needs to be brought under control."

This vision of machines taking over the world, emanating largely from Samuel Butler, has long been discredited as people have become aware that machines are only extensions of the human body.

A spade is an extension of the arm of the digger; a computer is an extension of the brain and hand of the programmer. Interestingly enough, one of the first authorities the Fabian authors rest their argument on is Samuel Butler.

The pamphlet proceeds to expound on the enormous changes that computers could wreak on our society over the next 30 years, claiming that at present these changes are outside the control of people.

The authors' agonising is accompanied by various inaccuracies and self-contradictions. For instance, they ask: "How can the rational scientific tradition of socialism help us to fight these dangers?" Then they quote Marcuse attacking "technological rationality" as an evil.

Several courses of action are proposed to increase control over the development of computer technology, mainly concerned with freedom of information and privacy.

One is to extend the brief of the proposed Data Protection Authority to cover "social impact" and "the dehumanising effect of the use of computers in a social context," where presumably it would have power to ban developments. How it would judge "dehumanising effect" is not specified.

The public has serious need of more sophistication about computers, to avoid being misled and to make sure it gets what it

wants rather than what the experts want. Unfortunately this pamphlet makes little constructive contribution to that aim.

*The computer and society, by Tom Crowe and John Hywel Jones. 18pp. 50p. Fabian Society, 11 Dartmouth Street, London, SW1H 9BN.

RORY JOHNSTON

NEWS IN BRIEF

Historic poster

A DECORATIVE poster, depicting the evolution of computers as a tree with many branches, has been produced by Management Information Corp. Each branch shows a different history making machine such as the IBM 607 in the 1950s, the 704 in the 60s, the System 360 starting in 1965 and the System 370 in the early 70s.

Copies at £15 each can be ordered from MIC at 140 Barclay Centre, Cherry Hill, New Jersey 08034.

£135,000 order

ELECTRICAL and mechanical turnkey contracting subsidiary of the Hawker Siddeley group, Hawker Siddeley Power Engineering, has purchased three Burroughs B800 systems worth £135,000.

Logabax at Osoott

REPLACING conventional cash registers, three Logabax LX4800 disc-based systems have been installed by Osoott Equipments, Birmingham-based car parts cash and carry company. Valued at £55,000, the systems will produce on-the-spot detailed invoices, handle stock control of 250,000 items as well as payroll, general accounting and label production etc.

Online policy

ONLINE policy registration has been added to the services provided by CMO's Croydon bureau to Europ Assistance, the Croydon-based travel insurance specialists. In response to client inquiries Europ can call up details of policies via Burroughs VDUs linked to CMO's Burroughs B4700.

Redifon scores 15

THE number of key-to-disc systems from Redifon Computers installed, with various Greater London boroughs will soon total 15, following orders placed by the London Borough of Hillingdon and the Corporation of London. The two orders are worth about £80,000.

First UK order

THE first UK order for the low-cost Digital Equipment Corporation 2020 mainframe (Cw, March 2), has been placed by Powell Butryn, Computer Services of Basingstoke, which will use the machine to run an online production control system, Protos.

Alternative

Daisy-wheel printers can now be used on the Kelle Infotec 7000 word processor as an alternative to the IBM golf ball printer. A new model, the Infotec 7000 Q, incorporates a Qume printer and costs £4,525. Existing units can be upgraded for about £2,000. Kelle Infotec word processors are marketed in the UK by DataWord Equipment.

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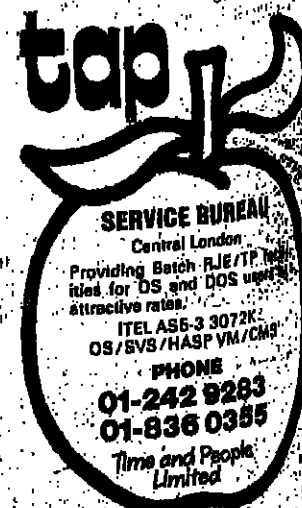
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